UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/846,920	04/30/2001	Robert Brodersen	05306P030	3664

7590 11/21/2005	EXAMINER

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ART UNIT	PAPER NUMBER
2178	

DATE MAILED: 11/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 August 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-31* is/are pending in the application.

　　4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-31* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

　　Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

　　Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

　　a)☐ All　b)☐ Some * c)☐ None of:

　　　1.☐ Certified copies of the priority documents have been received.

　　　2.☐ Certified copies of the priority documents have been received in Application No. _____.

　　　3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

　　* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
　　Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
　　Paper No(s)/Mail Date. _____ .
5)☐ Notice of Informal Patent Application (PTO-152)
6)☐ Other: _____.

DETAILED ACTION

Application History

1.   This action is responsive to the Request for Continued Examination, filed
on 8/19/2005.

2.   Applicant has amended claims 2-5, 7-13, 16, 18-22 and 24 and added
new claims 30 and 31.

3.   Claims 1-31 are pending in the case, claims 1, 6, 11, 16, 17 and 22 are
independent claims.

4.   A request for continued examination filed under 37 CFR 1.114, including
the fee set forth in 37 CFR 1.17(e), was filed in this application after a final
rejection. Since this application is eligible for continued examination under 37
CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the
finality of the previous Office Action (dated 5/17/2005) has been withdrawn
pursuant to 37 CFR 1.114.

Priority

5.   As mentioned in previous office actions, applicant's claim for domestic
priority of US provisional application 60/283,713, filed 4/14/2001, under 35
U.S.C. 119(e) is acknowledged.

Claim Rejections - 35 USC § 102

6.   The following is a quotation of the appropriate paragraphs of 35

U.S.C. 102 that form the basis for the rejections under this section made in

this Office action:

> *"A person shall be entitled to a patent unless –*
>
> (e) *The invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language."*

7.   Claims 1-4, 6-9, 11-14, 16-20, 22-25 and 27-29 remain rejected and

claims 30 and 31 are rejected under 35 U.S.C. 102(e) as being anticipated by

Williams, US Patent 6,591,272, filed 2/22/2000, patented 7/8/2003.

8.   **Regarding independent claim 1**, Williams discloses finding a set of

records of a database matching an instance of a component of an object type.

Williams recites: *"The process of interrogation of relational database schema

or catalogs to obtain information pertaining to the database tables and the

interrelationships between database tables is well known"* (column 2, lines 59-

62) and *"The use of software to map objects from relations and data in

relational database management systems or vice versa to object oriented

applications is also well known"* (column 3, lines 3-5).

Williams discloses updating the set of records of the database based upon a first set of instances of components of the object type, the instance of components of the first set corresponding to the records of the set of records. Williams recites: "*In the prior art, one could typically update the underlying relational database(s) exclusively through the object system*" (column 3, lines 58-59) and "*The present invention also relates to a method of communication of changes to existing objects from client computers and their conversion into updates to one or more rows so as to modify the rows of the appropriate tables in the corresponding databases in transactional mode*" (column 5, lines 34-38).

Williams discloses inserting new records in the database corresponding to a second set of instances of components of the object type, the instances of components of the second set not matching the records of the set of records. Williams recites: "*For object insertions, an OSFORBStream is built in the client that contains the new attributes of the object to be inserted*" (column 14, lines 2-4) and "*## attributeName## tells OSFGenerate to take the name of the current attribute on this iteration of the repeat block, change the first character of the attribute name to lower case, then insert this attribute name in place of the ##attributeName## target*" (column 25, lines 57-61).

9.   **Regarding dependent claim 2**, Williams discloses deleting records related to the object. Williams recites: "*The present invention also relates to a method of communication removal existing objects from client computers so*

as to delete the rows of the appropriate tables in the corresponding databases in transactional mode" (column 5, lines 39-42).

10.   **Regarding dependent claim 3**, Williams discloses the use of users keys related to the object instance. Williams recites: "Further, validation of a sequence number, client IP address, client hostname and timestamp is performed on each received session security token before the username contained therein is used for an access check" (column 19, lines 15-19).

11.   **Regarding dependent claim 4**, Williams discloses the use of SQL. Williams recites: "Pseudo-objects are then produced by dynamic generation and execution of pre-optimized SQL, enveloping values that result from execution of the generated prepared SQL statements" (column 5, lines 2-5).

12.   **Regarding independent claims 6, 11, 16, 17 and 22**, the claims are directed toward a method, apparatus, method, machine-readable medium and a system (respectively) for the method of claim 1, and remain rejected using the same rationale.

13.   **Regarding dependent claims 7, 12, 18 and 23**, the claims are directed toward a method, apparatus, machine-readable medium and a system (respectively) for the method of claim 2, and remain rejected using the same rationale.

14.   **Regarding dependent claims 8, 13, 19 and 24**, the claims are directed toward a method, apparatus, machine-readable medium and a system

(respectively) for the method of claim 3, and remain rejected using the same

rationale.

15.   **Regarding dependent claims 9, 14, 20 and 25**, the claims are directed

toward a method, apparatus, machine-readable medium and a system

(respectively) for the method of claim 4, and remain rejected using the same

rationale.

16.   **Regarding dependent claims 27-29**, Williams discloses recursively

repeating the finding, updating and inserting with respect to children of the

object. Williams recites: "*The records returned would have been appended to*

the "raw" OSFORBStream and the process repeated until all subtables

associated with the child object were read. This generalized model works for

all table interrelationships, no matter how many foreign keys, primary keys or

tables are involved in the creation (or insertion, update and delete) of the

PRO-OBJECT" (column 73, lines 44-51).

17.   **Regarding dependent claim 30**, Williams discloses finding the first and

second sets of instances of components of the object type, each of the first

set of instances corresponding to a corresponding one of the set of records

and none of the second set of instances corresponding to any of the set of

records. Williams recites: "*The process of interrogation of relational database*

schema or catalogs to obtain information pertaining to the database tables

and the interrelationships between database tables is well known" (column 2,

lines 59-62) and "*The use of software to map objects from relations and data*

in relational database management systems or vice versa to object oriented applications is also well known" (column 3, lines 3-5).

18.   **Regarding dependent claim 31**, Williams discloses the first and second set of instances of components are instances of components of a same object in Figure 3 at reference sign 38, shown as a table of instances of the same object, with at least a first and second instance of the object.

Claim Rejections - 35 USC § 103

19.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

20.   Claims 5, 10, 15, 21 and 26 remain rejected under 35 U.S.C. 103(a) as being unpatentable over Williams in view of Cseri et al. US Patent 6,708,164, filed 3/17/2000, patented 3/16/2004.

21.   **Regarding dependent claim 5**, Williams discloses recursively finding, updating, inserting and deleting records of a relational database as described above. Williams fails to disclose cascaded deleting. Cseri teaches the use of

cascaded deleting. Cseri recites: *"if a relational schema provides information about cascading delete constraints, then the cascading delete constraints is taken to indicate nesting. In a relational system, a cascading delete constraint permits specifying that children of a parent are automatically deleted, if the parent is deleted"* (column 7, lines 13-18).

Therefore, it would have been obvious, to one of ordinary skill in the art at the time the invention was made to use cascaded deleting as taught by Cseri with the data translation invention of Williams in order *"for information exchange among networked applications and the continuing and increasing use of relational database systems for managing businesses"* (Cseri, column 1, lines 14-16).

22.   **Regarding dependent claims 10, 15, 21 and 26**, the claims are directed toward a method, apparatus, machine-readable medium and a system (respectively) for the method of claim 5, and remain rejected using the same rationale.

Response to Arguments

23.   Applicant's arguments filed 1/7/2005 have been fully considered but they
are not persuasive.

24.   **Regarding independent claim 1**, the applicant states: *"Williams does not
teach or suggest finding a set of database records matching an instance of a
component of an object type, and then updating the same set of records
using instances of components corresponding to this set of records, as
claimed in the present invention"* (page 12, third paragraph of the amendment
filed 8/19/2005). Applicant is directed to the rejection of claim 1 as restated
above. In response to applicant's argument that Williams fails to disclose
updating the *"same"* set of records, Williams recites: *"Structured Query
Language or "SQL" is used to define database elements, consisting, but not
limited to: tables, columns with tables, data types of columns, relationships
between tables, constraints of numerous types, and to perform queries upon
and to also perform create, update, delete operations upon the
aforementioned elements"* (column 2, lines 48-53). Williams use of SQL
describes the standard method used in relational database technologies to
find (query) a set of records for the purpose of updating the same set of
records.

25.   **Also regarding independent claim 1**, the applicant recites: *"Williams
does not teach or suggest finding a set of database records matching an
instance of a component of an object type, and then inserting new records*

corresponding to a second set of instances of components of the <u>same</u> object

type, as claimed in the present invention" (page 12, fourth paragraph of the

amendment filed 8/19/2005). Applicant is directed to the rejection of claim 1

as restated above. In response to applicant's argument that Williams fails to

disclose inserting the *"same"* set of records, Williams recites: *"Structured*

Query Language or "SQL" is used to define database elements, consisting,

but not limited to: tables, columns with tables, data types of columns,

relationships between tables, constraints of numerous types, and to perform

queries upon and to also perform create, update, delete operations upon the

aforementioned elements" (column 2, lines 48-53). Williams use of SQL

describes the standard method used in relational database technologies to

find (query) a set of records for the purpose of inserting (create) new records

of the same object type.

26.   **Regarding new claims 30 and 31**, applicant asserts that Williams fails to

teach or suggest the limitations of the claims (page 13, paragraphs 1-3 of the

amendment filed on 8/19/2005). Applicant is directed to the rejection of claims

30 and 31 as stated above.

27.   **Regarding independent claim 6**, the applicant argues that: "the Office

Action is in mistake in asserting that *"The other limitations of claim 6 are also*

considered to be directed toward substantially the same subject matter as

claim 1." In claim 1, what is updated is *"the set of records of the database".* In

claim 6, what is updated is "instances of components of the instance".

Records of a database are clearly different from component instances of an object instance. Similarly, in claim 1 what is inserted is records; and in claim 6 what is inserted is instances of components" (page 13, paragraphs 4-5 of the amendment filed on 8/19/2005). The examiner contends that *"the set of records of the database"* and *"instances of components of the instance"* are substantially the same thing. Elmasri et al. describes database records and instances in the 1994 text book *"Fundamentals of Database Systems"* by the Benjamin/Cummings Publishing Company, Inc. Elmasri et al. describes instances as: *"The data in the database at a particular moment in time is called a database set (or set of occurrences or instances). In a given database state, each schema construct has its own current set of instances; for example, the STUDENT construct will contain the set of individual student entities (records) as its instances"* (page 25, third paragraph). Elmasri et al. teaches that an instance is a record. The rejection of claim 6 is proper.

28.   **Regarding claim 28**, applicant argues that: "it is clear that the process repeated in Williams is for the creation (or insertion, update and delete) of an object, not for the creation (or insertion, update and delete) of records of a database" (page 14, paragraphs 2 of the amendment filed on 8/19/2005). Williams describes objects as *"database tuples"* in the following: *"software to manually map database tuples (rows of a table or, more importantly, multiple rows of related tables) into objects for use by object oriented languages such as Java and C++ is also well known"* (column 2, line 66 to column 3, line 2). Williams defines objects as records of a database.

Conclusion

29.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gregory J. Vaughn whose telephone number is (571) 272-4131. The examiner can normally be reached Monday to Friday from 8:00 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen S. Hong can be reached at (571) 272-4124. The fax phone number for the organization where this application or proceeding is assigned is (571) 272-2100.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

STEPHEN HONG
SUPERVISORY PATENT EXAMINER

Gregory J. Vaughn
November 10, 2005